

Empowerment as a Trojan Horse: New Systems of Work Organization in the North American Automobile Industry

Charlotte Yates, Wayne Lewchuk
McMaster University
and Paul Stewart
University of the West of England

While new models of work organization (lean production) in the automobile industry have been portrayed as a 'democratic' break with Fordism, we find considerable parallels with those traditional patterns of labour control they were intended to supplant. Far from understanding these as exemplars of 'democratic Taylorism', the article identifies specific company responses to problems associated with declining productivity and competitiveness. Moreover, the article argues that new models of work organization associated with lean production, far from heralding empowerment, are more concerned with asserting management control in varying ways in different companies.

Keywords: control, empowerment, lean production, quality of working life, work intensification

Recent debates over the merits of new systems of work organization in the automobile industry have promoted flexible work practices, teamwork and lean production as more humane and productive alternatives to Fordism with the potential to reduce employee alienation and improve the quality of working life (Womack et al., 1990). In these debates, mostly emanating from the agenda initiated by the International Motor Vehicle Programme (IMVP), the existing Fordist systems of work organization are portrayed as arrangements where management controls decision-making and employees

Economic and Industrial Democracy © 2001 (SAGE, London, Thousand Oaks and New Delhi), Vol. 22: 517-541.
[0143-831X(200111)22:4;517-541;019753]

perform well-defined tasks requiring minimal creative input on their behalf. Described as 'despotic Taylorism', Fordist systems are claimed to have exhausted their capacity for increasing productivity and efficiency in part because of their inability to exploit the knowledge employees have of the production process. In contrast, the new models of work organization are described as 'democratic Taylorism' and 'a powerful synthesis of intellectual and manual labour' (Adler, 1993: 98; Florida and Kenney, 1991: 388). New models of work organization have been portrayed as a fundamental break with Taylorist and Fordist labour control strategies, giving employees new authority to design their jobs, control working conditions and make decisions leading to improved productivity (Womack et al., 1990; Walton, 1985; Kenney and Florida, 1993). This view has entered public policy circles, where new systems of work organization are increasingly portrayed as the solution to the economic ills facing industrialized economies, with the potential to increase productivity through flexible, empowered employees organized into team-based production units.¹

This article argues that the debate over empowerment and participation are intellectual Trojan Horses which have deflected our attention from the real changes taking place in workplaces and their impact on employees' experiences of reorganized work. Moreover, by framing the debate in terms of two contrasting systems of production, the old static Fordist system and the new model of lean production, much of the literature produced under the auspices of the IMVP school on work reorganization in the auto industry fails to grapple with the reality that all firms have had to adapt to survive. Moreover, this literature fails to address the divergent strategic responses of automobile producers to declining productivity and competitiveness, divergences which stem in part from different company prioritization of work reorganization with quite different effects on employees, and ultimately industrial relations.² Using data drawn from a survey of motor vehicle employees in Canada, it will be argued that what is critical in current changes in workplaces, is not the replacement of Fordism by lean production and the end of alienation of employees from their work, as the supporters of flexible systems of work organization and lean production would have us believe. Rather, companies that prioritize work reorganization in their efforts to regain competitiveness and increase productivity are intent upon changing the production standards and the wage effort bargain implicit in the post-Second World

War compromise reached by automobile companies and their employees in North America (Ginden, 1995: 108–24).

This discussion of the motives and consequences of work reorganization in North America must be seen in a rather different register to that accounting for the innovative work reorganization strategies initiated by Volvo (summed up under the graphic notion of reflexive production) and much commented upon over the last decade and more (see Sandberg, 1995). It is not our intention to elaborate on this work except to concur with the emphasis on social context and social settlement suggested by, among others, Sandberg (1995), Boyer and Durand (1998), Dohse et al. (1985) and Haslam et al. (1996). Notwithstanding the fact that the Swedish automotive industry faced similar problems to those in other countries – including excess capacity, problems with staff recruitment and retention and international competition – the social democratic context in which Volvo operated shaped the company's response to this sectoral crisis. Rather than adopting a response defined around Toyota's mantra of 'quality, cost and volume', Volvo offered an alternative form of work reorganization. Indeed, the very term 'reflexive production', preferred by, inter alia, Ellegård and colleagues (Ellegård, 1996; Ellegård et al., 1990) encapsulates perfectly the distinctive organic (and inclusive social) approach of the non-lean responses to a variety of problems in the industry. For sure, and in contrast to, respectively, the Volvo organic and the German codetermination agendas suggested by a 'social' response to the sector's problems, the neoliberal agenda, and the one we focus upon here, can be seen as the preferred option in North America – variations, following Freyssenet and Boyer (2000) notwithstanding.

In this sense we favour the term 'lean production' because, as our data illustrate, the idea of 'lean', from the point of view of an employee's quality of working life, somewhat unintentionally sums up the outcome of workplace reorganization carried out under its auspices. This is not the intention of the term. But 'lean' is what employees tell us they experience except when it comes to workload. One needs to recall that this is contrary to the intention of its advocates, whereby under the guise of lean production there will be an improvement in the quality of working conditions and an increase in levels of empowerment. The term may be a rhetorical device yet, rhetoric aside, there are indeed organizational processes associated with lean production. *Kaizen*, just-in-time (JIT), continuous improvement and teamwork are concerned with stripping

out costs (mostly, if not only, labour costs) and have the effect of diminishing an employee's positive experience of work and employment.

In brief, models of work organization adhering to the lean production school are therefore not concerned with giving employees 'power' because they are in fact about 'taking back' control over the intensity and the context in which employees actually work. What employees experience is far from participation and an enhanced quality of working life. Employees report less control over their work and tell us that their work is both difficult and time limiting. Although in Europe as we pointed out there has been considerable interest in the theme of the quality of working life, most notably in the context of Volvo in Sweden (Ellegård et al., 1990) and on VW and Mercedes in Germany (Gerst et al., 1999) it has received less attention in North America largely due to the hegemony of the IMVP agenda. Moreover, some of the substance of the theme of empowerment and subordination is touched upon by a number of contributors to the French-based GERPISA programme although as we point out later this is not GERPISA's main research objective. (See, *inter alia*, the work in Durand et al. [1999] on employee subordination in the context of teamwork.)

Second, our account rejects the ahistorical notion suggesting that attempts at restructuring occur in terms of a Fordism lean production continuum. In a similar vein to GERPISA, we argue that the distinctive pattern of company practices needs historical grounding. The IMVP's approach is incapable of making sense of different company strategies in terms of work changes including their variable effect on employees and on industrial relations in each company. Rather, our account is a historically rooted and path-dependent analysis of corporate restructuring and workplace change. We emphasize how, since the mid-1970s, similar outside factors have led to changes at all companies in our study and that in their different ways they have all become 'leaner' and, especially in respect of employees' experience, work has become 'harder'. This too is an emphasis echoed (although our theme again is different) in the GERPISA network. Nevertheless, it would be reasonable to argue that GERPISA's overriding concern has been to delineate the distinctive pattern of firm trajectories and profit strategies including their various 'productive models' (Boyer and Durand, 1998). Freyssenet and Boyer have argued that firm trajectories should be

interpreted as determinate pathways in the pursuit of specific profit strategies. Various, these can be understood as the 'Fordian' model (mass production standard model, until the 1950s) and the 'Sloanian' model (volume and diversity 1950s-1970s, see, Freyssenet and Boyer, 2000: 4; Boyer and Freyssenet, 2000). At the same time, two Japanese companies were developing distinctive patterns of productive firm trajectory, albeit related to those already existing. These were respectively, the 'Toyotan' model, driven to seek 'permanent reduction of costs at constant volume' (Freyssenet and Boyer, 2000) in contrast to the 'Hondian' model, a distinctive 'profit strategy [based upon] "innovation and flexibility"' (Freyssenet and Boyer, 2000). Freyssenet and Boyer further link these distinctive trajectories to the 'national income distribution and growth mode that the international context privileged after 1974' (Freyssenet and Boyer, 2000). These trajectories are growth models comprised of the 'successful', or coherent, articulation of 'enterprise government relations', 'product policy', 'productive organization' and 'employment relations' (Freyssenet and Boyer, 2000).

Yet, our concern, and one which extends the agenda of research into the quality of working life tradition familiar in Sweden and Germany particularly, is with workplace changes in terms of their impact on labour standards. Indeed, we argue that an emphasis on this is crucial in telling us something about the way in which workers' experiences of employment change. Each company's historical experience of institutionalized labour management relations, especially in terms of how production standards were established and whether they remained sites for ongoing workplace struggle, conditioned labour and management's understanding of the world and their relationship to each other. In turn, this historical legacy shapes both the identification of and solutions to problems. Companies therefore follow different paths of restructuring which have differential effects on employees' experience of work in terms of empowerment and quality of work life. While we reject the IMVP's bipolar account of workplace change (despotic vs democratic Taylorism), we feel this rhetorical device provides a useful tool in our address to the IMVP's other ideological claim that lean production improves the quality of working life. We can begin to address the vexed question of what has happened to the automobile workplace, not only from the firm's standpoint but also from that of labour.

A Survey of Working Conditions in the Motor Vehicle Industry

Informed largely by managerial views of changes in work organization, the supporters of lean production have asserted that it empowers employees and that this empowerment is critical to the system's ability to deliver improved levels of productivity and quality of work life. Yet, the bulk of empirical work on workplace reorganization has offered little evidence of empowerment. In contrast, work reorganization is often associated with work intensification (Lewchuk and Robertson, 1996, 1997).³ A recent report by Statistics Finland provides a rare longitudinal study of workloads. Between 1977 and 1997, the percentage of employees reporting their work was physically demanding increased from 34 to 36 percent, while the number reporting their work pace had increased in the last few years rose from 46 to 62 percent (Lehto and Sutela, 1999: 41). Recent work on the Saturn, NUMMI and Chrysler Jefferson North plant, three advanced sites of new work practices, describe production systems that have resulted in the transfer of a number of management tasks such as time studies to work teams, but that have also led to work intensification, and in the case of NUMMI a serious increase in repetitive strain injuries (Shaiken et al., 1997: 17-45; Adler et al., 1997). Many would now argue that the elimination of human and physical buffers associated with lean production results in employees having fewer choices and even less voice than under the Fordist model of work organization. Recent scholarship on teamwork and flexible work practices demonstrates that employees perceive teams as management tools for work intensification but not empowerment (Jones, 1997; Danford, 1998).

With the objective of deepening our understanding of the impact of new models of work organization on the quality of working life, surveys were conducted in nine Canadian motor vehicle assembly plants.⁴ Rather than collecting data from management or even union representatives, we rely on data collected from employees who were asked a series of questions regarding workload and empowerment. Table 1 describes the sample.

All the plants in the study have undergone changes in work organization, and, at least on the surface, many of these changes are consistent with the lean production model. The changes have been the most extensive at CAMI and General Motors (GM), and less so at Ford and Chrysler. The CAMI plant in Canada is a joint GM Suzuki initiative where many aspects of Japanese work

TABLE 1
Characteristics of the Sample

| Company | Surveys Distributed | Surveys Returned | Average Age | Female (%) |
|----------|---------------------|------------------|-------------|------------|
| Chrysler | 1450 | 868 | 38 | 17 |
| Ford | 450 | 325 | 42 | 7 |
| GM | 1800 | 1125 | 43 | 10 |
| CAMI | 550 | 106 | 33 | 23 |

Source: CAW/McMaster Quality of Working Life Survey (1996).

practices have been implemented including teams, job rotation and continuous improvement. The GM plants have all been affected by the corporate promotion of synchronous manufacturing beginning around 1989 and the more recent drive by the company to implement its own version of team-less lean production. GM has reorganized its workplaces to reduce buffers, implemented JIT systems and created a top-down, management-driven process of continuous improvement and workplace re-engineering. Chrysler has placed less emphasis on work reorganization, focusing instead on re-engineering its products and new marketing strategies. The extent of work reorganization has increased recently as the company moves to implement the Chrysler operating system. Ford has until recently also placed less emphasis on workplace reorganization, focusing instead on improved built-in quality. Here as well, work reorganization has recently become more important with the launch of the Ford 2000 programme. These varied strategies have decidedly different influences on work practices and labour relations in each company and, it would appear, the quality of work life.

Tables 2-4 provide basic indicators of working conditions at the four companies. They confirm the conclusion reached by other critics of lean production in automobile plants. There is little evidence that employees have been empowered by the changes taking place over the last ten years. Workloads remain heavy and health and safety problems affect a large percentage of the workforce.

Table 2 looks at a series of questions which shed light on the degree to which employees have been empowered as a result of work reorganization. Can they change things they do not like about their jobs, can they vary their workspace, can they get time

TABLE 2
Indicators of Employee Empowerment

| | Chrysler | GM | Ford | CAMI |
|---|----------|------|------|------|
| Percentage reporting it was difficult to change things you do not like about your job | 70.5 | 76.9 | 76.7 | 81.9 |
| Percentage reporting they can vary their workpace a little or not at all | 45.6 | 50.3 | 41.0 | 49.1 |
| Percentage reporting it was difficult to get time off to attend to personal needs | 4.2 | 17.8 | 11.6 | 57.1 |
| Percentage reporting they rarely talked with other employees outside of breaks | 34.6 | 55.9 | 31.2 | 20.8 |

Source: CAW/McMaster Quality of Working Life Survey (1996).

off work, can they interact with other employees during the work day? There is little evidence that employees have gained much in these areas, and for employees at CAMI and GM, which have made the most progress in implementing the lean agenda, the degree of empowerment appears to be minimal. Over 70 percent of all employees report it would be difficult to change things they do not like about their jobs, while at CAMI, the one plant with teams in the sample, over 80 percent reported they had little power to change things. GM and CAMI employees were also the least likely to report they could vary their work pace. When asked how easy it was to get time off to attend to personal matters such as a sick child or a doctor's appointment there were significant differences between companies. Employees at CAMI were the most likely to report difficulty getting time off, reflecting in part differences in contract language at CAMI relative to the other three companies. But even at the other companies, employees at GM appear to have more trouble getting time off than Ford or Chrysler employees. There were also differences in the ability of employees to interact with each other, which we would argue is a precondition of empowerment. The employees at CAMI were the least likely to report it would be difficult to talk with other employees, while employees at GM, which has aggressively pursued a form of team-

TABLE 3
Workload

| | Chrysler | GM | Ford | CAMI |
|--|-----------------|-----------|-------------|-------------|
| Percentage reporting physical workload too heavy | 30.5 | 48.1 | 28.9 | 38.5 |
| Percentage reporting work speed too fast | 39.7 | 77.8 | 40.2 | 45.7 |

Source: CAW/McMaster Quality of Working Life Survey (1996).

less lean production, were significantly more likely to work in isolation from other employees.

Table 3 reports responses to two questions regarding workload. The most intensive workload was reported by GM employees, where approximately five out of every ten reported their physical workload was too heavy and over seven out of ten reported it was too fast. Employees at CAMI were marginally less likely to report their work was too heavy or too fast, while employees at Chrysler and Ford were the least likely to report work was too heavy or fast. At Ford and Chrysler only three out of ten employees reported their physical workload was too heavy while four out of ten reported it was too fast. In both cases, these levels of work intensity are significantly lower than levels of intensity reported at GM.

The higher average age of survey respondents at GM than at the other companies might be expected to explain some of the increased reporting by employees at this company that their work is too heavy and too fast. Yet, this explanation does not hold up. CAMI has the lowest average age of employees of the four companies surveyed and yet their responses to questions on workload and speed are consistently higher than those from employees at Ford and Chrysler where average age is higher. Only about 10 percent of the sample were female and there were few significant differences in working conditions between men and women.

Table 4 reports responses to questions dealing with health and safety matters. While the patterns between companies are less pronounced than in Tables 2 and 3, the same basic ranking is evident. GM tended to score poorly on all four of the health and safety indicators, while employees at Ford and Chrysler were the least likely to report health and safety problems. These conclusions on health and

safety concur with those reached in studies of certain automobile plants in the USA. Adler et al.'s study demonstrates that in spite of high levels of employee involvement at NUMMI, health and safety, and especially repetitive strain injuries, became a significant problem during the 1993 model changeover (Adler et al., 1997). The union filed an official health and safety complaint against the company after repeated failed attempts to get the company to address problems. Adler et al. conclude that in spite of several ergonomic evaluations by NUMMI, the company 'did not demonstrate the kind of continuous improvement in ergonomic outcomes that it did with quality and efficiency' (Adler et al., 1997: 432). In contrast to Adler, we do not find this surprising. Rather, his findings reinforce our argument that work reorganization is more about increased productivity than employee empowerment or health and safety. Shaiken et al. found that significant numbers of employees at both the Chrysler and Saturn plants reported that the pace of work was faster and that they worked harder now than at their previous plants (Shaiken et al., 1997).

Tables 2-4 paint a picture of motor vehicle work in the 1990s where workloads are high, empowerment low and health and safety conditions poor. Two aspects of these tables provide the basis for the remainder of this article. First, there is little support

TABLE 4
Health and Safety

| | Chrysler | GM | Ford | CAMI |
|---|----------|------|------|------|
| Percentage reporting working in physical pain or discomfort at least half the days last month | 42.8 | 67.2 | 46.2 | 41.5 |
| Percentage reporting in a physically awkward position at least half of each day | 41.1 | 60.0 | 42.6 | 53.8 |
| Percentage reporting they were somewhat or very tense and wound up at work last month | 51.4 | 76.5 | 53.9 | 61.3 |
| Percentage reporting they were exhausted after work most days | 39.4 | 62.5 | 38.1 | 45.7 |

Source: CAW/McMaster Quality of Working Life Survey (1996).

for the hypothesis that new models of work organization are leading to improved working conditions or empowerment. Quite the opposite appears to be the case. The companies where management have been the most aggressive in reorganizing work along lean principles, GM and CAMI, also tend to score the worst on most of our workload, empowerment and health and safety indicators. Employees at Ford and Chrysler, companies where the pursuit of lean production has placed less emphasis on work reorganization, were less likely to report excessive workloads and poor health and safety conditions. Second, the differences between the responses of employees at GM relative to the response of those employed by Ford and Chrysler requires some explanation. While GM has pushed work reorganization the furthest in Canada, these are still all automobile plants where many of the physical characteristics of work are quite similar. The high level of dissatisfaction of GM employees suggests that the company has prioritized and implemented changes to the nature of work and the work effort in a way that the other companies did not. This suggests that the changes since the mid-1980s reflect divergent corporate responses to pressures to compete in a globalized market. In particular, we argue that the greater company emphasis on gaining control over production standards and work effort explains the differential responses of employees in each company to the questions posed in our survey.

From Postwar Convergence to Corporate Divergence: The Issue of Production Standards in the Race to Compete

In the North American automobile industry, postwar negotiations between unions and companies consisted of a set of tradeoffs between wage and productivity increases and a temporary truce in the battle over production standards. Although collective agreements encoded management's control over operations and the workplace, management did not receive a blank cheque to do as it pleased. Management rights were constrained by legislative minimum standards, formal union rules and informal workplace norms that regulated the work day and work effort. The negotiation of seniority clauses (including bumping and transfer rights), job classifications, paid vacations and grievance procedures, to name a few, saw unions succeed in regulating production standards and ultimately constrain management's rights to unilaterally allocate labour

in the workplace (Katz, 1985; Yates, 1993). Although unions failed to establish formal rules about the speed of work, informal norms developed that constrained management's right to adjust line speed to increase productivity and profitability through absolute exploitation of labour.⁵ Maintaining employee compliance was contingent on management keeping to these norms. Further, because of the development of centralized union management institutions and relations in the North American auto industry, unions forced an industry-wide convergence in the regulation of production standards, something which began to come unstuck in the 1980s and led to widespread company divergence in the 1990s.

Restructuring of the auto industry around the model of lean production has thus reopened the question of production standards which had temporarily been resolved in the Second World War. As automobile companies around the world compete in a neck-and-neck race for survival and expanding market share, each second of idle labour or equipment becomes part of the quest for the elimination of waste and the drive for continuous improvement.

Our findings in the previous section suggest that as companies have reorganized their workplaces in response to new market forces, there has been a divergence in the quality of work life between companies. Management at GM and CAMI have been more successful in shifting production standards in management's favour compared with management at the other companies. In this section, using historical-institutional information on the North American, and in particular the Canadian experience, we argue that these differences are an outgrowth of divergent corporate responses to the growing competitive pressures in the auto industry combined with the particular organizational histories of each corporation. In other words, it is the combined impact of contemporary strategic responses to internationalization of the auto industry and corporate history that shape and explain why individual corporations place varied emphasis on the importance of changing production standards.

Tables 5 and 6 reinforce our argument about the divergent responses across companies to issues of production standards. Taken together they suggest that within the Canadian plants, the decline of the postwar settlement has created more labour relations problems at GM. These tables not only underline the divergent strategies adopted at the various companies, but allow us to begin to make sense of why GM employees responded so differently to

the survey questions than employees at the other companies. Table 5 highlights changes in the pattern of strikes at each company as the institutions associated with the postwar labour settlement came unravelled. GM led the way in institutionalizing labour management relations in the postwar period. Not surprisingly, GM had the lowest level of strike activity of the three corporations prior to 1975. As these corporations responded differently to the challenge of increased competition beginning in the mid-1970s, so the pattern of strike activity began to diverge. GM's share of strike activity increased above that of the other companies. Strikes over discipline, which are reported in Table 6, are used as a further indicator of deteriorating labour management relations and a contest between employees and management for control over day-to-day work issues. Once again, GM's pattern of strike activity involving discipline changed dramatically in the post-1975 period, thus further underscoring the pattern of increased conflict between labour and management at this company.

A closer examination of each company's history over the period sheds further light on the differences revealed in the preceding text. Labour management relations at Chrysler operations in North America were characterized by much higher levels of conflict in the postwar years than the other two corporations. Face-to-face confrontations by labour with management over production standards were commonplace throughout the 1950s and 1960s, something that is reflected in the strike statistics in Tables 5 and 6. The postwar settlement tradeoffs between wages and productivity were negotiated at the international union level but often failed to achieve

TABLE 5
Percentage of Strikes in Each Period by Company, 1945-97
(Canadian Operations)

| | Chrysler | Ford | GM |
|---------|----------|------|----|
| 1945 55 | 45 | 43 | 13 |
| 1956 65 | 46 | 34 | 20 |
| 1966 75 | 32 | 37 | 30 |
| 1976 85 | 31 | 24 | 45 |
| 1986 97 | 15 | 39 | 54 |

Source: Workplace Information Directorate, HRDC, Stoppage Master File, Strikes Since 1946 (SIC 323 - motor vehicle manufacturers).

TABLE 6
Percentage of Strikes (Including Wildcat) at Each Company over Discipline Issues,
1945-97 (Canadian Operations)

| | Chrysler | Ford | GM |
|---------|----------|------|----|
| 1945 55 | 11 | 18 | 0 |
| 1956 65 | 27 | 25 | 20 |
| 1966 75 | 38 | 11 | 27 |
| 1976 85 | 0 | 29 | 77 |
| 1986 97 | 0 | 0 | 29 |

Source: Workplace Information Directorate, HRDC, Stoppage Master File, Strikes Since 1946 (SIC 323 - motor vehicle manufacturers).

the desired stability and peace on the Chrysler shop floor. Steve Jefferys, in his book on Chrysler, attributes this state of affairs to a highly mobilized rank and file in a company, managed with limited corporate planning or systematic control procedures. Collective responses to workplace problems were more likely at Chrysler owing to the incumbent radical union leadership and a dense network of shop stewards and workplace caucuses. New life was breathed into this radicalism in the 1960s, as black and Canadian nationalist caucuses brought the effects of social movement politics into the UAW, and especially into Chrysler union politics and labour management relations (Jefferys, 1986). These groups were ready to defend their claims for decent working conditions with direct collective action.

Given this history, it is perhaps surprising that Chrysler did not pursue in the 1980s and 1990s a strategy for restructuring which focused on changing production standards to intensify and extend the working day. To some extent Chrysler did pursue this strategy but did so almost a decade earlier than GM or Ford. The effects were therefore much different. In the early 1970s, Chrysler began to experience serious financial and market difficulties. Evidence from the USA suggests that the corporation responded to these initiatives with periodic layoffs and pressure to extract more labour from the remaining workforce (Jefferys, 1986). These corporate pressures coincided with changes in union leadership and a weakening of shop floor networks at Chrysler, the effect of which was to constrain resistance through collective action to Chrysler's tactics. When on the brink of financial disaster in 1978-9, Chrysler

was able to take advantage of the insecurity fostered by this crisis, and the declining influence of militants, to build a new relationship of cooperation with the UAW. The result was wage concessions in the 1979-82 period and a series of new cooperative ventures, including a seat for the UAW president on the company's board of directors and the introduction of quality circles. After this initial crisis, however, allocation of labour and labour costs receded as central elements in Chrysler's strategy for revival. Under a new management team, led by Iacocca, Chrysler tactically positioned itself as a more specialized car maker with an emphasis on new product design. Work reorganization figured less prominently in the company's strategy than did re-engineering and new marketing strategies (Iacocca and Novak, 1984).

Yet, Chrysler's recovery depended upon the timely delivery of newly engineered cars to the market, which in turn depended upon low levels of labour conflict. The new era of labour management cooperation could not guarantee this as it proved to be an unstable arrangement, quickly coming under pressure. Canadian auto employees declared their opposition to wage concessions in 1981, and in 1982 fought Chrysler in a six-week strike to recoup some of the wages already lost. A Canadian victory paved the way for American Chrysler employees to follow suit (Yates, 1993: 206-10). With corporate success seemingly around the corner by 1984, and in the face of a remobilizing workforce, Chrysler could not risk a return to the old days of shop floor conflict and disruption. Thus, the corporation agreed to continue master and pattern bargaining within the established institutionalized labour management framework. Moreover, the company willingly negotiated various innovative bargaining breakthroughs in the 1980s and 1990s around the issue of production standards, including in 1991 an agreement with Canadian auto employees to pay employees an eight-hour day for seven-and-a-half hours' work in exchange for a three-shift operation. Chrysler's strategy for regaining its competitiveness therefore relied less on work reorganization or unilateral management control over production standards. The corporation placed a greater premium on peaceful, stabilized relationships with the union, which in turn meant fewer dramatic changes to the nature of work. Chrysler's strategy has kept the peace between labour and management and allowed the corporation to produce steadily some of the highest quality cars and mini vans without interruption from strikes or workplace discord.

Ford followed a different trajectory than Chrysler. Where accountants and finance-types had dominated both Chrysler and GM, engineers held much greater pride of place in the Ford motor corporation. Henry Ford saw his Model T as a feat of modern engineering at the time and took pride in promoting people from the shop floor into senior positions rather than relying on the products of business schools. This emphasis on engineering in production was partnered with a strong paternalism in labour relations. Paternalistic strategies, combined with the use of thuggery in the 1940s and other union avoidance strategies, did not stop Ford employees from unionizing. After more than a decade of protracted conflict between managers and employees, often over production standards, Ford labour management relations stabilized in the late 1950s, through a mixture of bureaucratic control via structured labour management agreements and old-style paternalism. While this did not forfeit strikes entirely, the nature of strikes shifted at Ford from annual expressions of labour management conflict and distrust to periodic disturbances in the negotiation of the tradeoff between wages and productivity (Yates, 1993: Ch. 4).

Pressures mounted on Ford, as with the other corporations in the late 1960s and early 1970s. Ford's paternalism found new expression in the emergent quality of working life experiments. Of all the Big Three corporations operating in North America, Ford invested most in employee involvement schemes, quality of working life and other labour management cooperative ventures, seeing in these schemes the key to encouraging labour to take ownership over the company's competitive future and over the quality of cars built on the line. Ford's traditional commitment to engineering resonated with the growing emphasis on quality in re-engineered vehicles, leading Ford to identify its corporate survival strategy in the 1980s with its slogan of 'Quality is Job 1'. The combined commitment to coopting labour and building quality in, led Ford to invest heavily in training, employee involvement schemes and, where possible, teams. Ford's strategy has been successful in displacing labour conflict and downplaying the importance of changing production standards and working conditions.

This analysis of Chrysler and Ford helps explain the results to the survey questions reported in Tables 2, 3 and 4. Both Chrysler and Ford have made changes to production standards and the wage effort bargain, but as outgrowths of restructuring strategies that

do not make central the issue of work reorganization. Moreover, such changes have involved real tradeoffs with the union and have gained the consent of the workforce. Therefore, it is not surprising that employees at both Chrysler and Ford see themselves as having fewer problems in exercising some control over their work (Table 2), are less likely to report heavy workloads and high work speeds (Table 3) and have lower incidences of health and safety problems (Table 4).

GM played the leading role in negotiating the postwar settlement and therefore ironing out the wage productivity tradeoff that stabilized postwar labour relations. Although unions established a series of formal and informal rules to exert some control over production standards, the Treaty of Detroit, as it has come to be known, signalled the unions' willingness to relinquish their role in establishing production standards and controlling the shop floor in exchange for steady wage increases and a share of productivity increases (Katz, 1985). The allocation of labour and day-to-day shop floor conditions became management rights. Labour relations at GM came to epitomize the bureaucratic form of control where union and company alike worked to resolve conflict through institutional means, rather than in direct confrontation.

As the largest vehicle producer in the world, GM was in a much stronger position than either Ford or Chrysler when economic troubles first began to register in the late 1960s and early 1970s. GM's superior market position vis-a-vis its North American competitors combined with its large reserves of capital for investment bought this corporation more time to respond to growing international competition and changing market conditions. Yet, GM squandered much of its head start by lurching from one unsuccessful restructuring strategy to another, finally committing its energies to a strategy of work reorganization where the goal became one of forcing employees to work harder and longer.

In the 1970s, GM identified the root of its problems in high labour costs, not quality or design. GM's initial strategies for lowering labour costs were aimed at sidestepping the constraints of the Treaty of Detroit. In the early 1970s, GM pursued a 'Southern Strategy' of building new plants in the low-wage southern states of the USA, followed by a labour-displacing strategy of investment in high technology, in particular robotization (Bluestone and Harrison, 1982; Keller, 1989). Neither of these strategies bore the fruit

expected by GM. Instead, the corporation found itself with growing productive capacity at a time of shrinking market shares and expensive investments in technology which could not deliver the 'lights-out' operations anticipated by GM. GM's third strategy reflected a shift of emphasis from lower labour costs to a reorganized workplace with a more compliant labour force. Investments using Japanese-inspired organization led to the establishment of NUMMI, the Saturn plant and, somewhat later, the CAMI joint venture with Suzuki in Canada. Although these plants arguably delivered significant gains to GM, they remained isolated experiments in a corporation unable, due to corporate organizational inertia and a growing financial crisis, to translate the lessons learned at these sites to its other plants.

By the mid-1980s, GM was in serious financial and market trouble. Pressures from shareholders exacerbated GM's need to find a quick fix to its accumulated disasters. GM returned to its original diagnosis of lower labour costs as the key to its competitive future. This time, however, rather than focusing its attentions on lowering wage costs, GM looked to extracting more work from its existing workforce. This required an attention to work reorganization and production standards, especially demands for increased flexibility in the allocation and daily use of labour power. Growing numbers of layoffs by GM combined with the changing political climate created the necessary insecurity to initiate changes among its workforce. Using its overcapacity as a strategic weapon, GM pitted plants against one another in a bid to extract more flexible shift arrangements, extend the working day to increase and make more flexible the scheduling of overtime and speed-ups of the assembly line.⁶ Plants that could not offer such changes were closed immediately, or threatened with no new product line. A prime example of this strategy was evident at the largest Canadian GM operation located in Oshawa. In the early 1990s, GM threatened the plant with no new product lines if it did not accept radical reductions in negotiated restrictions on shift scheduling and overtime. It buttressed these demands with pressure on governments to eliminate legislative restrictions on overtime. Although this particular issue was resolved by the national union, ultimately during the 1996 round of bargaining, the company continued to push for greater control over the allocation of labour.

In terms of immediate productivity, this strategy has worked. Between 1989 and 1995, labour content per vehicle fell faster at GM plants than those operated by Ford or Chrysler (*Ward's Automotive Year Book*, 1996; *The Harbour Report* 1992 and 1996 as cited by Kumar and Holmes, 1998). Yet, there are growing costs to GM of pursuing this strategy. GM's particular path of restructuring which makes work reorganization pivotal is aimed at extracting more labour from employees under increasingly confined and alienated, rather than empowering, conditions. The result, according to survey findings reported earlier, is a workforce that sees itself as working harder and faster with less control over its day-to-day work experience than is reported in plants owned by other companies. GM employees also reported higher incidences of health and safety problems, including more employees who work in pain, under stress and experience exhaustion at the end of the day. These experiences combined with GM's determination to push forward its strategy unilaterally, with disregard for its relationship with the union and its workforce, has created a bitter and remobilizing workforce seen in the growing number of strikes experienced by GM. Besides the immediate costs associated with higher strike rates and health and safety problems, the creation of a hardened and antagonistic workforce is likely to prevent GM from pursuing further its goal of labour flexibility. At the same time, GM's current strategy of 'bloody Taylorism' is likely to create workplace conditions that prevent it from experimenting with other forms of restructuring once its present course of action is exhausted.

Production standards play a role in all corporate strategies for survival. Overtime is in increasing use throughout the auto industry, at the same time that subcontracting and the role of part-time and temporary employees is increasing. In recognition of the growing costs associated with idle machinery and labour at a time of cut-throat competition, all auto companies are experimenting with ways to run plants continuously throughout the day and night. What distinguishes GM from the other corporations is its prioritization of work reorganization around production standards in its restructuring initiatives and its use of tactics of fear and intimidation to address production standards directly and quickly. For Chrysler and Ford, production standards are more often a byproduct of other strategic priorities and can be more effectively addressed through cooptation and peer pressure.

Conclusions

Based on our empirical data and historical-institutional corporate analysis, we argue that the restructuring strategies pursued by auto companies are not converging around a single version of lean production. Rather different companies interpret the lessons of lean through the lenses of their particular history and institutionalization of labour management relations. Consequently, their approaches to work reorganization and, in particular to the issue of production standards, diverge. The result is quite varied corporate courses of action with different implications for employees and their union. Ford has prioritized quality; Chrysler has prioritized re-engineering and new marketing strategies; and GM has resorted to extracting more labour from its existing workforce. Although the goal of these strategies is commonly centred on increased productivity, and hence profitability, the varied strategies pursued by the three corporations have different effects on how employees presently experience their work and the future of labour management relations. These effects create divergent corporate legacies which shape the future courses of action open to the different companies.

Little evidence exists of the empowerment of employees in the automobile industry. Assembly work continues to be physically demanding, monotonous and in many instances alienating. Hours of work have been extended and work has intensified. Employees do not have significantly greater control over their work lives, beyond that negotiated by unions in collective agreements. Yet, within these parameters there are significant differences between companies. Employees at GM and CAMI are more likely to report their work as too fast and too heavy. GM employees also experience greater isolation and greater physical strain while at work. Although employees at Chrysler and Ford have made some gains on the road to lean, often through negotiated settlements between company and union, they too report many of the same problems as employees at GM, albeit at significantly lower rates of incidence.

Automobile companies have used the opportunity of restructuring their operations and the push for competitiveness to revisit established practices in the area of production standards. The drive for more flexible shift scheduling and allocation of labour

hours has borne the fruits for companies of near continuous production and extended hours of work. Across the board in the automobile industry, average hours worked have crept upwards, with some plants such as the Chrysler mini van plant in Windsor reporting standard 48-hour work weeks for the past five years or more. Yet, the different approaches by companies to the issues of production standards have produced divergent outcomes, in terms of labour management relations and the possibilities for future strategic initiatives. Ford's emphasis on quality and Chrysler's concentration on re-engineered vehicles and new marketing techniques have meant less direct priority placed on work reorganization and changing production standards. Both Ford and Chrysler have built on existing labour management stabilities, an outgrowth of Fordist institutional arrangements, to pursue their restructuring strategies, thus creating a climate of cooperation and mutual labour management commitment to company success. Alterations to production standards, such as extended hours of work, have been a byproduct of these other strategies but something to which employees have agreed. Although these strategies have not succeeded in taking as much labour content out of vehicles as is evident at GM, we would argue that Ford and Chrysler have succeeded in relying more upon consent from their workforces to make changes and this has the long-term benefits for the corporations of reducing labour management conflict and opening the possibility of new innovative ways of restructuring.

GM, on the other hand, has in the 1990s returned to a modified drive system to extract more out of its existing workforce. GM has prioritized changes to production standards as a way of reducing labour costs and labour inputs to production. It has achieved this by pitting employees against employees, plants against plants and communities against communities. GM has fostered a culture of fear and insecurity to force employees to accept changes in the workplace that make their work harder and faster. Although this has led to more rapid rates of productivity increases at GM, in the short run, the company has paid a price in the form of higher levels of strike activity and an increasingly antagonistic and distrustful workforce. GM may have locked itself into a collision course with its workforce, which makes turning onto a new route of change more difficult.

Lean production has not offered one model for change among North American auto producers, but rather multiple vantage points

from which companies engage in restructuring. Few of these restructuring initiatives offer the early promises of greater empowerment and 'nice' work for employees on the assembly line. Yet, different strategies have produced divergent labour management practices and approaches to production standards. Although none of the prevalent company strategies offer employees significant empowerment or an end to the monotony and arduousness of assembly work, these divergent company strategies do suggest that employees in some companies may fare better than others. Some companies may reap the rewards of returning to a drive system of production which in the 1930s spurred the spread of unionism and militancy among employees.

Notes

The survey results presented in this article are drawn from collaborative work with the Canadian Automobile Workers and David Robertson, who has played an important role in shaping the authors' understanding of contemporary work reorganization. Yates and Lewchuk would like to acknowledge the support of their other colleagues at McMaster, the Social Sciences and Humanities Research Council, who partially funded this research, and Delia Hutchinson and Kim Sardella for supporting our efforts.

1. See OECD (1996: 129-75) for an example of how the empowerment debate is now dominating policy analysis. For critique, see Edwards et al. (1997).
2. Even those who generally support the new models of work organization have trouble finding any correlation between empowerment and productivity. See, Oliver et al. (1994) and Pil and MacDuffie (1996).
3. A number of studies suggest that the actual practice of lean production is fundamentally different from the system described in management texts. See, CAW-Canada Research Group (1993); Rinehart et al. (1997); Fucini and Fucini (1990); Garrahan and Stewart (1992); Babson (1995); Green and Yanarella (1996); and Graham (1995).
4. There were four GM plants, three Chrysler plants, one Ford plant and one CAMI plant in the study. Approximately one out of every ten workers employed by the Canadian companies were surveyed. For details on the survey methodology see, Lewchuk and Robertson (1997).
5. For unions such as the United Electrical Workers, which maintained a highly mobilized shop floor union and workplace culture, these informal social norms about line speed were periodically backed up by employees who took direct action, either through sabotage or localized work stoppages, to protest speed-ups.
6. For examples of communities and plants pitted against one another, see Jones and Bachelor (1993: Ch. 5) and Maryann Keller (1993: 41-4).

References

- Adler, P. (1993) 'Time and Motion Regained', *Harvard Business Review* January February.
- Adler, P., B. Goldoftas and D. Levine (1997) 'Ergonomics, Employee Involvement, and the Toyota Production System: A Case Study of NUMMI's 1993 Model Introduction', *Industrial and Labor Relations Review* 50: 416-36.
- Babson, S. (ed.) (1995) *Lean Work, Empowerment and Exploitation in the Global Auto Industry*. Detroit: Wayne State University Press.
- Bluestone, B. and B. Harrison (1982) *The Deindustrialization of America*. New York: Basic Books.
- Boyer, R. and J.P. Durand (1998) *After Fordism*. London: Macmillan.
- Boyer, R. and M. Freyssenet (2000) *Les Modèles productifs*. Paris: La Découverte.
- CAW-Canada Research Group on CAMI (1993) *The CAMI Report: Lean Production in a Unionized Auto Plant*. Willowdale, Toronto.
- Danford, A. (1998) 'Work Organisation inside Japanese Firms in South Wales: A Break from Taylorism?', in P. Thompson and C. Warhurst (eds) *Workplaces of the Future*. London: Macmillan.
- Dohse, K., U. Jürgens and T. Malsch (1985) 'From "Fordism" to "Toyotism"? The Social Organisation of the Labour Process in the Japanese Automobile Industry', *Politics and Society* 14(2): 142.
- Durand, J.P., P. Stewart and J.J. Castillo (eds) (1999) *L' Avenir du travail à la chaîne. Une comparaison internationale dans l'industrie automobile*. Paris: La Découverte.
- Edwards, P., J. Geary and K. Sisson (1997) 'Employee Involvement in the Workplace: Transformative, Exploitative, or Limited and Controlled', unpublished.
- Ellegård, K. (1996) 'Volvo - A Force for Fordist Retrenchment or Innovation in the Automobile Industry?', pp. 117-35 in P. Stewart (ed.) *Beyond Japanese Management: The End of Modern Times?* London: Frank Cass.
- Ellegård, K., Engström and L. Nilsson (1990) *Reforming Industrial Work: Principles and Realities in the Planning of Volvo's Car Assembly Plant in Uddevalla*. Stockholm: The Swedish Work Environment Fund.
- Florida, R. and M. Kenney (1991) 'Transplanted Organizations: The Transfer of Japanese Industrial Organization to the US', *American Sociological Review* 56.
- Freyssenet, M. and R. Boyer (2000) *The World that Changed the Machine*, Colloquium, June. Paris: GERPISA.
- Fucini, J.J. and S. Fucini (1990) *Working for the Japanese: Inside Mazda's American Auto Plant*. New York:
- Garrahan, P. and P. Stewart (1992) *The Nissan Enigma: Flexibility at Work in a Local Economy*. London: Mansell.
- Gerst, D., T. Hardwig, M. Kuhlmann and M. Schumann (1999) 'Group Work in the German Automobile Industry - The Case of Mercedes-Benz', in J.P. Durand, P. Stewart and J.J. Castillo (eds) *L' Avenir du travail à la chaîne. Une comparaison internationale dans l'industrie automobile*. Paris: La Découverte.
- Gindin, S. (1995) *The Canadian Auto Workers: The Birth and Transformation of a Union*. Toronto: Lorimer.
- Graham, L. (1995) *On the Line at Subaru-Isuzu*. Ithaca, NY:
- Green, W.C. and E.J. Yanarella (1996) *North American Auto Unions in Crisis, Lean Production as Contested Terrain*. New York: Bantam Books.

- Haslam, C., K. Williams, S. Johal and J. Williams (1996) 'A Fallen Idol? Japanese Management in the 1990s', in P. Stewart (ed.) *Beyond Japanese Management: The End of Modern Times?* London: Frank Cass.
- Iacocca, L. and W. Novak (1984) *Iacocca: An Autobiography*. New York: Bantam Books.
- Jefferys, S. (1986) *Management and Managed: Fifty Years of Crisis at Chrysler*. Cambridge: Cambridge University Press.
- Jones, J. (1997) 'Changing the Balance? Taylorism, TQM and Work Organization', *New Technology, Work and Employment* 12: 13-24.
- Jones, B. and L. Bachelor (1993) *The Sustaining Hand: Community Leadership and Corporate Power*, 2nd edn. Lawrence: University of Kansas Press.
- Katz, H. (1985) *Shifting Gears: Changing Labor Relations in the US Automobile Industry*. Cambridge, MA: Cambridge University Press.
- Keller, M. (1989) *GM, Rude Awakening*. New York: Harper Perennial.
- Keller, M. (1993) *Collision, GM, Toyota, Volkswagen and the Race to Own the 21st Century*. New York: Doubleday.
- Kenney, M. and R. Florida (1993) *Beyond Mass Production: The Japanese System and its Transfer to the US*. New York: Oxford University Press.
- Kumar, P. and J. Holmes (1998) 'Recent Patterns of Production and Investment in the Canadian Auto Industry', pp. 95-115 in H.J. Nunez and S. Babson (eds) *Confronting Change: Auto Labor and Lean Production in North America*. Detroit: Wayne State University Labor Studies Centre.
- Lehto, A.-M. and H. Sutela (1999) *Efficient, More Efficient, Exhausted: Findings of Finnish Quality of Work Life Surveys, 1977-1997*. Statistics Finland.
- Lewchuk, W. and D. Robertson (1996) 'Working Conditions under Lean Production: A Worker-Based Benchmarking Study', *Asia Pacific Business Review* 2(4): 60-81.
- Lewchuk, W. and D. Robertson (1997) 'Production Without Empowerment: Work-Reorganization from the Perspective of Motor Vehicle Workers', *Capital and Class* 63(Autumn).
- OECD (1996) *Technology, Productivity and Job Creation*, Vol. 2, pp. 129-75. Paris: OECD.
- Oliver, N., D. Jones, R. Delbridge and J. Lowe (1994) *Worldwide Manufacturing Competitiveness Study: The Second Lean Enterprise Report*. Anderson Consulting.
- Pil, F. and J.P. MacDuffie (1996) 'Canada at the Cross-Roads: A Comparative Analysis of the Canadian Auto Industry', unpublished.
- Rinehart, J., J. Huxley and D. Robertson (1997) *Just Another Car Factory? Lean Production and its Discontents*. Ithaca, NY: ILR Press.
- Sandberg, A. (ed.) (1995) *Enriching Production: Perspectives on Volvo's Uddevalla Plant as an Alternative to Lean Production*. Aldershot: Avebury.
- Shaiken, H., S. Lopez and I. Mankita (1997) 'Two Routes to Team Production: Saturn and Chrysler Compared', *Industrial Relations* 36: 17-45.
- Walton, R. (1985) 'From Control to Commitment in the Workplace', *Harvard Business Review* 53: 77-84.
- Ward's Communications (1996) *Ward's Automotive Year Book*. Southfield: Ward's Communications.
- Womack, J.P., D. Jones and D. Roos (1990) *The Machine that Changed the World: The Story of Lean Production*. New York: Rawson.
- Yates, C. (1993) *From Plant to Politics: The Autoworkers Union in Postwar Canada*. Philadelphia, PA: Temple University Press.

Charlotte Yates

is Professor of Politics and Labour Studies at McMaster University and author of *From Plant to Politics*. She has written widely on the political economy of unions and employment relations in the automotive industry.

Wayne Lewchuk

is director of the Labour Studies Programme at McMaster University. He has researched extensively on the history of technology in the automobile industry and is currently examining the impact of work reorganization on the quality of working life.

Paul Stewart

is Professor of Sociology of Work and Employment at Bristol Business School, the University of West of England. He has written widely on the changing nature of employment and the labour processes in the auto industry. All three authors have been working with trade unions in the auto industry for a number of years and are participants in an international network of researchers and trade unionists examining the impact of new management practices on the quality of working life in the automobile industry.